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WILLIAM JOHN COOPER, COMMISSIONER
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NATIONAL ADVISORY COUNCIL ON SCHOOL BUILDING PROBLEMS

Its Organization, Purposes, and Methods

By Alice Barrows
Specialist in School Building Problems, Office of Education

As there have been many requests for information during the past few months in regard to the purposes and organization of the National Advisory Council on School Building Problems, it seems advisable to set forth at some length the reasons for organizing the council and to describe its general aims and plan of organization.

Purposes and Organization of the Council

The National Advisory Council on School Building Problems was organized under the auspices of the Office of Education in December, 1929, in order to secure (1) comprehensive data on methods of solving school building problems in different parts of the country and under different types of school organization; (2) expert analysis of the data collected; and (3) constructive suggestions in regard to methods of solving school building problems.

The National Council is made up of nine regional councils, each region being based upon certain geographical units. Each regional council is made up of five representatives—a State superintendent, a city superintendent, a county superintendent, a school board member, an architect—and directors of divisions of schoolhouse planning of State departments of education who serve as ex officio members.

Why the National Advisory Council on School Building Problems Was Organized

The council was organized because the school building problem has become a highly technical one which requires the cooperative effort of many different types of experts for its solution.

The planning and erecting of school buildings is a far more complicated task than it was 20 years ago because the modern school building which has developed during the past 20 years represents a radical departure from the school building of previous periods. Owing to changed social and industrial conditions, which have deprived children in cities and small towns of many of the educational activities which formerly existed in the community life outside the school, the curriculum of the modern school has been enriched so as to give children the opportunity in the school for a great variety of play, handwork, and social activities which formerly were a normal part of their lives outside the school. These changes in the educational program of the schools have, of course, had a direct bearing upon the planning of school buildings. In order to meet the demands of the modern curriculum, the school building at the present time must contain not only classrooms but an auditorium, gymnasiums, manual training shops, cooking and sewing rooms, and a variety of other special rooms such as art rooms, music rooms, science rooms, library, etc. It must also provide for community activities for adults in the evening. Furthermore, because school buildings now accommodate much larger enrollments than formerly, problems of heating, ventilating, lighting, and sanitation have acquired an importance far greater than in the days of the 1-room country school.

The result is that the planning and erecting of school buildings has become a highly technical task which demands the combined skill and knowledge of educators, school building architects, landscape architects, health specialists, and heating, ventilating, lighting, and sanitation experts. Not only this, but the planning of a single building must now be based upon the whole school building program for a city. Therefore, school building surveys, involving studies of population trends, social and industrial development, etc., are basic to an adequate school building program. Such surveys are really part of the whole city planning problem of the city.

Why the Council Was Organized on the Basis of Geographical Units

School building problems can not be studied at long range. They must be studied in terms of actual school building situations and methods of meeting them; and they must take into account the differences due to geographical location, climate, educational aims and methods, availability of expert service, etc.

In other words, if the Office of Education is to serve as a national clearing house of information on school building problems, it is necessary to secure information through decentralized geographical units, to mobilize in those units the expert knowledge of those actually

engaged in solving school building problems, and to carry on, through direct contact with these regional units, continuous research and service on school building problems.

Detailed Statement of Plan of Organization of Council as Approved by State Superintendents and Commissioners of Education

At the annual meeting of the National Council of State Superintendents and Commissioners of Education held in Washington, D. C., December 10, 1929, the following plan for the organization of the council was submitted:

Proposed Plan of Organization

Purpose.—It has been suggested that an Advisory Council on School Building Problems be organized to work in cooperation with the Office of Education to secure:

1. Comprehensive data on methods of solving school building problems in different parts of the country and under different types of school organization.
2. Expert analysis of the data collected.
3. Constructive suggestions in regard to methods of solving school building problems.

Proposed regional plan of organization of the Advisory Council.—It is proposed that the country be divided into 9 different regions, each region to be composed of approximately 5 States, and the Advisory Council to be made up of 5 representatives from each region, or a total of 45 members, to be appointed by the United States Commissioner of Education for periods of 1, 2, or 3 years. The geographical regions shall be, during the first year, the same as those adopted by the American Institute of Architects.

Members of the Advisory Council from each region.—One State superintendent, 1 city superintendent, 1 county superintendent, 1 school board member, and 1 architect. (The regional directors of the American Institute of Architects shall be the architect representatives for each regional council. They shall submit to the council names of school building architects who shall serve in an advisory capacity to the council.) Chiefs of State divisions of schoolhouse planning to be ex officio members.

The Advisory Council in each region may add to its number any or all of the experts in different phases of the building problem listed. There may be one of each of these experts for each region or one for each State in each region, according to what seems best to the several Advisory Councils: 1 structural engineer, 1 heating and ventilating engineer, 1 sanitary engineer, 1 lighting expert, 1 acoustics expert, 1 physician or health education expert, and 1 landscape architect.

General plan of work.—When the Advisory Council, in cooperation with the Office of Education, has decided upon studies that are to be made research committees will be formed either in each region or by groups of regions. The Office of Education will assist in collecting the data and submitting them to the research committees for analysis.

It is proposed that one general meeting of the Advisory Council be held each year at the convention of the Department of Superintendence in February when the appointments to the Advisory Council will be announced and officers of the council elected.

Commissioner Cooper appointed the following committee to consider the foregoing plan and to report to the National Council of State Superintendents and Commissioners of Education: Chairman, A. T. Allen, State superintendent of public instruction, North Carolina; members, C. H. Dempsey, commissioner of education, Vermont; and Vierling Kersey, State superintendent of public instruction, California. This committee submitted the following resolutions to the council on December 10 and they were adopted by unanimous vote of the council:

The committee on school building service begs leave to report as follows:

We recommend that the National Council of State Superintendents and Commissioners of Education take the following actions:

1. That it indorse the whole idea of the organization of the Office of Education, as outlined by Commissioner Cooper, in its relation to the State departments of the several States upon a cooperative and advisory basis.

2. That it approve in particular the suggested plan for the appointment of an advisory council of 45 members on school building service.

The committee recommendations are based upon the following considerations:

1. That such a service in the Office of Education would constitute a clearing house for the dissemination of practical and helpful information.

2. That such a service would soon be in a position to furnish scientific data, to give constructive advice, and to make wise suggestions on all phases of the construction of an adequate and appropriate school plant.

3. That such a service would tend to make building activities conform more directly to the housing needs of an educational program.

4. That such a service would be of inestimable value to State departments by putting them in easy touch with the best thought and experience in this field.

5. That such a service would in no way interfere with the educational autonomy of the States.

Signed:

A. T. Allen,
State Superintendent of Public Instruction, North Carolina,
Chairman.

C. H. Dempsey,
Commissioner of Education, Vermont.

Vierling Kersey,
State Superintendent of Public Instruction, California,
Members.

In accordance with the instructions of the National Council, Commissioner Cooper appointed members for each of the nine regional councils as follows:

Members of the National Advisory Council on School Building Problems for February, 1930, to February, 1931

. *New England region:*
State superintendent—C. H. Dempsey, Vermont, 3-year term.
City superintendent—A. J. Stoddard, Providence, R. I., 2-year term.

1. *New England region*—Continued.
County superintendent—Carl Cotton, Rockingham County, N. H., 1-year term.
School board member—L. H. Baldwin, Rutland, Vt., 1-year term.

1. *New England region*—Continued.
   Architect member—Charles D. Maginnis, Boston, Mass.
2. *New York region:*
   State superintendent—Frank P. Graves, New York, 1-year term.
   City superintendent—William H. Holmes, Mount Vernon, N. Y., 2-year term.
   County superintendent—Glenn G. Steele, Oneida County, N. Y., 1-year term.
   School board member—Frank H. Wood, Chatham, N. Y., 1-year term.
   School building director—Joseph H. Hixson, State department of education, Albany, N. Y., 1-year term.
   Architect member—Charles Butler, New York, N. Y.
3. *Middle Atlantic region:*
   State superintendent—Charles H. Elliott, New Jersey, 3-year term.
   City superintendent—William M. Davidson, Pittsburgh, Pa., 1-year term.
   County superintendent—E. W. Broome, Rockville, Md., 1-year term.
   School board member—David B. Tompkins, Princeton, N. J., 1-year term.
   School building director—HuBert C. Eicher, State department of education, Harrisburg, Pa., 1-year term.
   Architect member—Charles T. Ingham, Pittsburgh, Pa.
4. *South Atlantic region:*
   State superintendent—A. T. Allen, North Carolina, 3-year term.
   City superintendent—Charles B. Glenn, Birmingham, Ala., 3-year term.
   County superintendent—G. Miller Eleazer, Richland County, S. C., 1-year term.
4. *South Atlantic region*—Continued.
   School board member—T. J. Darling, Ware County, Ga., 1-year term.
   School building directors—
   J. L. Graham, State department of education, Atlanta, Ga., 1-year term.
   R. E. Ledbetter, State department of education, Birmingham, Ala., 1-year term.
   Raymond V. Long, State department of education, Richmond, Va., 1-year term.
   S. T. Clemons, State department of education, Columbia, S. C., 1-year term.
   J. O. Martin, State department of education, Atlanta, Ga., 1-year term.
   Architect member—William H. Lord, Asheville, N. C.
5. *Great Lakes region:*
   State superintendent—Francis G. Blair, Illinois, 1-year term.
   City superintendent—William A. Wirt, Gary, Ind., 2-year term.
   County superintendent—H. E. Hall, Wood County, Ohio, 1-year term.
   School board member—John H. Webster, Detroit, Mich., 1-year term.
   Architect member—Frederick W. Garber, Cincinnati, Ohio.
6. *Central States region:*
   State superintendent—George A. Allen, jr., Kansas, 1-year term.
   City superintendent—M. C. Potter, Milwaukee, Wis., 3-year term.
   County superintendent— ———— ————.
   School board member—Jacob G. Huber, Sioux City, Iowa, 1-year term.

6. *Central States region*—Continued.
   School building directors—
      Samuel A. Challman, State department of education, St. Paul, Minn., 1-year term.
      H. W. Schmidt, State department of education, Madison, Wis., 1-year term.
      Haskell Pruett, State department of education, Oklahoma City, Okla., 1-year term.
   Architect member—Louis La Beaume, St. Louis, Mo.
7. *Gulf States region:*
   State superintendent—S. M. N. Marrs, Texas, 2-year term.
   City superintendent—Nicholas Bauer, New Orleans, La., 1-year term.
   County superintendent—Sue Powers, Shelby County, Tenn., 1-year term.
   School board member—J. B. Howie, Gulfport, Miss., 1-year term.
   School building directors—
      W. G. Eckles, State department of education, Jackson, Miss., 1-year term.
      C. M. Hirst, State department of education, Little Rock, Ark., 1-year term.
      J. Fred. Horn, State department of education, Austin, Tex., 1-year term.
7. *Gulf States region*—Continued.
   Architect member—Olle J. Lorehn, Houston, Tex.
8. *Western Mountain region:*
   State superintendent—N. C. Showalter, Washington, 2-year term.
   City superintendent—Charles A. Rice, Portland, Oreg., 3-year term.
   County superintendent—Andrew Ogle, Weld County, Colo., 1-year term.
   School board member—W. W. Wilson, Sandy, Utah, 1-year term.
   Architect member—Fred Fielding Willson, Bozeman, Mont.
9. *Sierra Nevada region:*
   State superintendent—Vierling Kersey, California, 2-year term.
   City superintendent—C. E. Rose, Tucson, Ariz., 1-year term.
   County superintendent—Ada York, San Diego County, Calif, 1-year term.
   School board member—Alfred I. Esberg, San Francisco, Calif., 1-year term.
   School building director—Andrew P. Hill, jr., State department of education, Sacramento, Calif., 1-year term.
   Architect member—Myron Hunt, Los Angeles, Calif.

According to the plan of organization, the duty of the architect member of each regional council is to submit to Commissioner Cooper the names of school building architects living in his region, and, on appointment by Commissioner Cooper, these architects are to serve in an advisory capacity to the regional councils for one year. Before the meeting of the Advisory Council in Atlantic City, the following advisory architects were named and appointed on the recommendation of the architect members of each regional council.

List of Advisory Architects to the National Advisory Council on School Building Problems, by Regions

1. *New England region:*
   - Cooper, Frank Irving, Boston, Mass.
   - Gardner, George C., Springfield, Mass.
   - Kilham, Walter H., Boston, Mass.
   - Sturgis, R. Clipston, Boston, Mass.
2. *New York region:*[1]
   - Brockway, Albert L., Syracuse.
   - Green, Edward B., Buffalo.
   - Hopkins, Albert Hart, Buffalo.
   - King, Melvin L., Syracuse.
   - Randall, James A., Syracuse.
   - Schmill, Karl, Buffalo.
   - Spangenberg, Frank A., Buffalo.
3. *Middle Atlantic region:*
   - Betelle, James O., Newark, N. J.
   - Brazer, Clarence W., Chester, Pa.
   - Catherine, Irwin T., Philadelphia, Pa.
   - Harris, Albert L., Washington, D. C.
4. *South Atlantic region:*
   - Martin, Hugh, Birmingham, Ala.
   - Noland, William C., Richmond, Va.
   - Northup, Willard C., Winston-Salem, N. C.
   - Sayward, William J., Atlanta, Ga.
   - Walter, Nat G., Fort Myers, Fla.
   - Wilson, Charles C., Columbia, S. C.
5. *Great Lakes region:*
   - MacCornack, Walter Roy, Cleveland, Ohio.
   - Malcomson, W. G., Detroit, Mich.
   - Perkins, Dwight H., Chicago, Ill.
6. *Central States region:*
   - Hewitt & Brown, Minneapolis, Minn.
   - Ittner, W. B., St. Louis, Mo.
   - Trueblood & Graf, St. Louis, Mo.
7. *Gulf States region:*
   - Cameron, Ralph H., San Antonio, Tex.
   - Dehnert, John W., Houston, Tex.
   - Flint, Lester N., Dallas, Tex.
   - Jackson, Emmet T., San Antonio, Tex.
   - La Roche, E. Bruce, Dallas, Tex.
   - Neild, Edward F., Shreveport, La.
   - Overstreet, N. W., Jackson, Miss.
   - Payne, Harry D., Houston, Tex.
   - Phelps, Raymond, San Antonio, Tex.
   - Seiferth, Solis, New Orleans, La.
   - Steele, R. D., Houston, Tex.
   - Stern, Eugene J., Little Rock, Ark.
8. *Western mountain region:*
   - Not appointed.
9. *Sierra Nevada region:*[1]
   - Not appointdd

First Annual Conference

The plans for the council called for a general meeting once a year at the time of the convention of the Department of Superintendence. Consequently, the first conference of the council was held on February 26, 1930, at the Hotel Madison, in Atlantic City. Fifty-four members of the council and advisory architects were present. The meeting was opened at 10.30 a. m. by United States Commissioner of Education William John Cooper, who presided until noon, when he was compelled to leave to attend another meeting. He appointed Hon. S. M. N. Marrs, State superintendent of public instruction, Texas, to act as chairman for the remainder of the conference. Commissioner Cooper opened the meeting with a brief introductory talk.

[1] List of advisory architects from New York City and Sierra Nevada Region not received until after the meeting of the Advisory Council.

Reasons for a National Advisory Council on School Building Problems

By WILLIAM JOHN COOPER
United States Commissioner of Education

I am glad to see so many here to discuss what appears to me to be a very important matter. By way of introduction, may I say that the United States Commissioners of Education have been for many years interested in school buildings. For some years Dr. F. B. Dresslar gave full time and attention to schoolhouse planning and kindred problems. In the later years of his service, while a member of the faculty of Peabody College for Teachers, Doctor Dresslar continued to devote part of his time to the problems of our office. Death has now removed him from serving us and has made new arrangements necessary. During the past few months the Office of Education has been reorganized along the lines of bringing its activities more fully into the field of research in education. We are well aware, however, that there are some activities which must be carried on in the field. Therefore, we have one large division of our staff called the service division. To it are assigned such responsibilities as directing or assisting in school surveys. Since a study of school housing plays a large part in most city school surveys, we have one specialist, Miss Alice Barrows, devoting her time and energies to the school building problem.

It will probably mean economy in time and money if we can furnish a clearing-house service for information in this field. I have in mind some experiences which I had while serving as city superintendent of schools. For instance, I found no uniformity in the number of electric-light fixtures in a standard schoolroom of roughly 24 by 32 feet. I found that there was agreement that there should be 10 lumens of light intensity at the pupils' work level. When we put a lighting engineer at work on this problem he brought in graphs which showed that: One 2,000-watt lamp would furnish this for much of the room area but would furnish much greater intensity than we asked in the middle and less than we desired at the ends and sides of the room; two 1,000-watt lamps improved the situation by giving better light at the ends and less glare in the middle; four 500-watt lamps improved the situation; and six 300-watt lamps were still better. The interesting part of the study, however, was that we learned that eight 200-watt lamps furnished us the 10 lumens on every pupil's desk with no spot of overbrightness and that the outlets for these lamps would not take 300-watt or other higher-powered lamps. This not only guaranteed us against careless overloading of our circuits but insured economy of operation, for we could run an hour on 1,600 watts' consumption of power instead of 1,800 or 2,000 under the other plans. Moreover, by putting these eight lamps on two circuits it was possible

to use half the equipment on occasions when full lighting was not required. We were in a position to choose between a slightly larger capital outlay with lesser operating cost and the lesser initial outlay with greater operating cost and less satisfactory lighting.

One more example may be of interest. We discovered that architects, without any apparent reason, were showing on plans casings for doors and windows that were 4 inches wide. A millman with whom we were consulting told us that this specification required cutting that material from 1 inch by 6 inch lumber, wasting approximately 50 per cent of the material for which we had to pay. Thereafter we made a standard specification of 3¾ inches. Many other similar situations came to light as we developed building standards in a committee composed of men of many interests and a wide variety of experience. These are some advantages of standardization which might well be known to all who are erecting schools.

If this were the whole story we might well gather such data and send it out from our office, or we might have a small advisory council of experts to help us and not take the time of you busy men and women. But it happens that in my experience I have known of splendid building plans that have been copied for a school in States quite remote from the location of the original building. The second building has been almost as unsatisfactory as the original was good, due perhaps to peculiarities in site, an orientation of the building which gave either wrong light or a wind direction that drove odors from toilets through the classrooms, wrong landscaping, or some similar defect. Yet I find a great tendency to interchange and copy plans. Therefore, it seems wise for us to create a council which would be representative of regions—one which would furnish a guarantee against copying good Alabama buildings in Minnesota and prevent using plans suitable for a foggy or cloudy climate in the arid and semiarid Southwest. Fortunately, the American Association of Architects had for purposes of their own defined such regions. For our own beginnings we accepted their areas and have asked their representatives from each of the nine areas to come here as the representatives of the architects. From each such region I have invited one State superintendent or commissioner of education, one county superintendent of schools, and one city superintendent of schools. It seemed to me that we needed lay advice, especially in this day of high costs of construction. Therefore, I felt the taxpayer might well be represented and one city school board member has been invited to sit with us.

If, after full discussion, you conclude that valuable ends may be served by a National Advisory Council on School Building Problems, I suggest that you elect officers for the first year and that as soon as

possible each region hold a meeting and invite to join the five members of this council such other experts as you wish. You will find valuable the knowledge and interest of structural engineers, heating, ventilating, and lighting engineers, acoustical experts, millmen, electricians, plumbers, and general contractors. There will also be found specialists among the architects who can assist. Such are experts in design, or color, or landscaping. This sort of decentralized council will be very acceptable to the Commissioner of Education not only because it capitalizes for the benefit of us all the particular knowledge of each one but also because it safeguards any service we render from a nation-wide standardization. It helps us render a service and safeguards us from any possibility of exercising control. That fits in exactly with the policy of the present administration at Washington.

I now take pleasure in presenting to you Dr. HuBert C. Eicher, who will speak to us on the subject, What Is the Basis of a Modern School Building Program?

What Is the Basis of a Modern School Building Program?

By Dr. HuBert C. Eicher
Director of School Buildings, Pennsylvania State Department of Education

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With approximately 10,000,000 boys and girls in the United States without adequate and satisfactory schoolhousing accommodations and our municipal indebtedness increasing annually by leaps and bounds, the importance of a meeting such as this is already established and needs little or no justification. It is estimated that at the present time three billions of dollars is needed for new school buildings and 251,000 additional classrooms are required in the country to meet the enrollment. As Doctor Cooper has stated, we are assembled here to-day in the interest of the common problem of adequately and economically housing the boys and girls of school age in the United States. I do not know of any more pressing problem in our educational program which at the present time warrants more careful consideration and thorough study.

The evolution in our educational system is bringing about a marked change in the type and design of school buildings, and I predict that the next decade will see us face to face with school building problems which to-day are not even considered as a possibility. For example, every one of you here to-day will recall the time when a so-called school building consisted of a certain number of classrooms of equal size. Well do we recall the day when an auditorium, gymnasium, shops, and various special rooms were not a part of the school plant, while to-day a high-school building wherein at least some of these special features have not been incorporated could not be called a

school building. The school organization would not be recognized as such if certain of these special rooms were not provided. The result is that as the school system of America has developed and the various educational departments have contributed new phases and activities to the educational program the problem of schoolhousing has become more complex. The growing use of the school building by the community presents new problems in the arrangement of rooms, corridors, entrances, etc. The consolidated school and the vocational and junior high schools present problems which are distinct because of the varied nature of the work of each and the necessity for the proper segregation of the different departments.

School building progams, scientifically conducted, have therefore become important features of the whole school building problem. The public now insists upon knowing (1) what kind of a school organization is to be housed in the new building; (2) whether the proposed accommodations guarantee a just return to pupils for the time spent in school and to the community for the money expended; (3) trends, shifts, and increase or decrease in total and pupil population over a period of years; (4) what will it cost? These factors can be determined only after a thorough and scientific study of the school plant has been made and a careful estimate presented covering both present and future needs.

The following is an attempt to present in a brief and concise but constructive manner the essential factors which enter into the school plant survey and school building program. The outline is merely suggestive, no attempt having been made to analyze the method of procedure or to describe the successive steps to be taken in making the survey.

Four essential factors which enter into the school plant survey and school building program are as follows: In considering the subject before the assembly, namely, "What is the basis of a modern school building program?" we are confronted with the essential factors which enter into a school housing program which will guarantee adequate, safe, and sanitary school housing accommodations to the pupils along with an equitable return on the investment of public funds. Therefore, with this objective in mind, our problem evolves itself into the four following subdivisions, namely: The evaluation of the school plant; (2) studies in total and pupil population; (3) the school building program and estimated cost of same; and (4) fiscal status of the school district.

I. *Evaluation of the present school plant.*—The purpose of evaluating the existing school plant in any district is primarily to determine its present educational and salvage values to the community. This is best accomplished by a joint committee comprising members of the educational staff, local, State, or national, and persons familiar

with architectural and engineering problems. Such a committee will render a report devoid of obsessions and arrive at conclusions which otherwise are not possible—educational, architectural, and engineering.

The following should be included in the evaluation of the plant and treated fully:

1. Introduction—
   (*a*) State the aims and purposes of the survey and the methods employed in the study; sources of information and data.
   (*b*) Besides the personal inspection and measurement of each part of the plant, any of the standard score cards can be utilized to advantage.
2. School sites: Present and proposed; location, size, approximate cost. A careful analysis of real-estate values is vital.
3. School building structures: The plan and design, age, adaptability to future needs, safety, and sanitary condition.
4. Entrances and exits, for regular and emergency use.
5. Corridors and stairways.
6. Classrooms: Regular and special (shops, laboratories); size, number, and location of windows and doors; interior decorations; equipment.
7. Lighting of classrooms, natural and artificial.
8. Seating of pupils.
9. Blackboards.
10. Toilet facilities.
11. Water supply.
12. Heating and ventilating apparatus.
13. Coat rooms.
14. Special rooms.
15. Supervision of the school plant: Engineering and janitorial service.
16. Classification of departments of the organization: Elementary, junior, and senior departments.

Time precludes our considering or treating separately the 16 factors listed.

II. *Studies in total and pupil population.*—In order to project an efficient and economical school building program, it is essential to make a very careful study and analysis of the present and future population of the district. Total and pupil populations must be treated separately. The trends and possible shifts in population must be carefully noted and those sections of the school district which will be encroached upon by manufacturing and mercantile interests must be determined.

Dot maps showing the distribution of population, housing permits, and births are prepared by first dividing a map of the district into small sections. Railroads, watercourses, and main arteries of traffic are used for the dividing lines. Minor streets and other natural features may be used to further subdivide the areas. Each section is given an arbitrary designation for reference, and in order to present the acquired data in condensed form a system of letters and numbers is most satisfactory.

The latest figures of the Federal Census Bureau may be used for the total population of any district. The enumeration districts, however, are considerably larger than the sections used for the pupil-population study. The total population in each section of an enumeration district is determined quite accurately by using the same percentage of the total as obtains for the elementary school pupils.

The local health officer's records give the number and location of births for a given period. Births in hospitals should be credited to the section where the home is located rather than to the location of the hospital. The location of births and of housing permits are helpful in predicting the trend of population.

The reliability of an estimate of future population depends primarily upon the accuracy and scope of past records along with a careful investigation of the possible future growth of the commerce and industry of the community. The data and information required is a tabulation indicating the population at regular intervals covering identical areas. The smaller the areas the more accurate will be the forecast. Unstable conditions caused by an unnatural boom or the removal or closing down of an industry must be investigated and taken into consideration.

Assuming a stable condition and taking a given area, the per cent increase or per cent decrease in population for each successive equal increment of time is computed. The rate of change for the future is based on the past performance, whether steady, accelerated, or retarded.

To present the trend of population in graphic form, first tabulate in numerical order the percentage rate of change for the areas considered and separate into four nearly equal groups. The areas in which the rate of increase is greatest are shaded darkest. The shading in each following group is made lighter, the lightest area representing a stationary condition or a decrease in population.

III. *The school building program and estimated cost of same.*—A. The evaluation of the school plant and the future population, especially the number of pupils to be accommodated over a period of not less than 10 years, but preferably 20 years, having been determined, the school building program can then be projected.

B. The cost of the school building program should be estimated on the basis of prevailing prices and should include estimates upon the three separate items: 1. School sites. 2. New buildings, (*a*) elementary, (*b*) junior, (*c*) senior high schools. 3. Remodeling present units, (*a*) increased glass area in classrooms, (*b*) artificial lighting, (*c*) new toilet facilities, (*d*) replacing heating and ventilating apparatus, (*e*) redecorating, and (*f*) miscellaneous repairs.

These three factors involve much detail and study and here, too, the 10 items listed can be merely mentioned and not treated in our study to-day.

Fiscal status of the school district.—The purpose of presenting the fiscal status of the school district in the school plant survey and school building program is to determine the financial ability of the district to finance the building program and to place before the community an analysis of the present and proposed financial policy.

The study of the fourth factor should include a careful analysis and presentation of the following: (1) School finances and school costs of the district, (2) school revenues, (3) expenditures for school purposes, (4) total expenditures, (5) current expenses, (6) school expenditures distributed by function, (7) ability of the district to pay for schools, (8) outstanding bonded indebtedness of district, (9) per capita valuation of taxable property, (10) tax rate for all municipal purposes, including schools, (11) assessed valuation and school tax rate, and (12) a summary of the fiscal findings and recommendations.

The justification for this is best illustrated in municipalities where the financial status of the community has not been protected by such studies and surveys. Wise investments of public funds rather than merely public expenditures without justification should be the slogan of every city, borough, and township. Chicago and other cities are facing emergencies which should not be repeated. A constructive and scientific school building program will aid materially in preventing a repetition of the experiences of some of the bankrupt communities of America.

Besides the manuscript outline and explanation of methods employed in the survey and school building program which we have thus far considered together, the manuscript should be supplemented with various illustrations, diagrams, and tables which bear directly upon the problem at issue. It is important that the manuscript be prepared in a clear and concise form, readily intelligible to the average layman. All of the facts should be presented, but illustrations, diagrams, and tables which do not bear directly upon the subject and play a vital part in the solution of the problem should be eliminated from the report. The purpose of some school surveys has been defeated because the essential factors were needlessly subordinated by nonessential and superfluous material which only added to the size of the printed report.

All illustrations, diagrams, and tables should be carefully classified and numbered with descriptive notes. In other words, every illustration should be described specifically, special features either good or bad carefully pointed out, and the name and number of the building wherein the certain department or equipment is installed should accompany the illustration, diagram, or table.

It is of vital importance that the report be printed in detail and that it be entered upon the minutes of the school district. Much valuable time, money, and effort have been lost because surveys were not printed and made a permanent part of the minutes of the district. Boards of school directors are changing continually and where the report is not made a permanent record, experience has proved that the functioning life of school building surveys is generally limited to the time the board is in office when the survey is made.

The results of school plant surveys and school building programs which have been made in various districts have not only provided a more efficient and permanent school plant for the district but have been the means of effecting a saving of hundreds of thousands of dollars on the building program. This economy means more and better schoolhousing accommodations in the future and increased salaries for both regular and special subject teachers.

Planning the building.—The survey and building program having been completed and the school loan authorized, where the program requires the bonding of the district, the next step is to provide plans and specifications wherein should be incorporated maximum accommodations with careful and due consideration to all the factors of economy. With the municipal debt of the United States in cities of 30,000 population and more increasing annually at the rate of $1,000,000,000 it is a vital civic and moral obligation on the part of all school districts to provide for an economic investment of school funds rather than to permit the practice of unwise, extravagant, and unwarranted expenditures which is sometimes experienced.

Since the main work of the school is carried on in the classroom and the greater part of the child's school hours is spent within the schoolroom walls, it follows that the unit of schoolhouse construction—the classroom—should receive first consideration in the new building plan. All other parts of the building should be made to conform to the requirements and standards employed in the plan, construction, and equipment of well-lighted, conveniently arranged, and properly and scientifically constructed classrooms. Too often interior arrangement is subordinated to exterior appearance.

Carefully conducted illuminometer tests of both natural and artificial lighting under varying conditions form the basis for the following discussion and recommendations on the illumination of classrooms.

The best light is obtained when windows are placed at the left of seated pupils and set toward the rear of the room; a dead space of not less than 4 feet should be left at the front of the window side of the classroom. Unilateral lighting reduces light glares and injurious reflections radiating from the blackboard. The Pennsylvania State law prohibits the placing of windows at the front of

the classroom. The total glass area should equal one-fifth to one-fourth of the total floor area, dependent upon presence or absence of light obstruction. Tall buildings, trees, and smoke from chimneys intercept light. The same is true of dirty windows. Light passing through soiled glass loses from 30 to 70 per cent of its intensity.

Windows should not extend below the level of the eyes of seated pupils and should be placed as near the ceiling as construction will permit. The glass line of the lower sash should be at least 42 inches from the floor and the construction should not require a distance greater than 6 inches from top of window to ceiling. It is a fact, too often disregarded, that the child is enabled to read only by means of the light that falls on his book and from it enters the eye. All other light rays interfere rather than help. Temporarily disregarding diffusion, rays of light that enter the room at and below the level of the page do not assist in reading because they can not fall upon the page. Furthermore, rays from such low levels may enter the eye directly, tending to blind the child to the work before him. The results of illuminometer tests indicate that light admitted at the point of vision of seated pupils and running parallel to the floor is practically three times as great as that emanating from the book which is illuminated from the same source. Such a condition subjects the pupil to severe eyestrain and ultimately leads to serious results. Since children must see and understand clearly with their eyes and ears before they can grasp a mental interpretation it is important that not only the required amount of light be provided in each classroom but that all light be properly and scientifically admitted.

A further detailed analysis of the various standards entering into the school plant is irrelevant at this time, and I merely mention a few of these in order to illustrate the importance of detail in a study of this kind. Fortunately, there are many organizations throughout the country which are studying individually and collectively this problem of the school plant and the results of these various efforts are being expressed in the form of modern school plants. Unfortunately, however, occasionally we find a building which has not been planned to meet the various problems presented by the curriculum or, on the other hand, we find an unwarranted expenditure of public funds, all of which can be traced primarily to a failure on the part of some one to make a thorough and scientific study and investigation of all the needs and requirements, basing the same upon the financial ability of the school district to pay.

In conclusion, the organization of the National Advisory Council on School Building Problems promises a clearing house and a place for the dissemination of material in regard to problems of the school plant of America. With the boy and girl in the foreground of our

objective, with a due and careful consideration of public funds to be invested in the school plant, along with a comprehensive survey which will include the four factors covered herein, I am sure America will be headed toward a better school plant for less money than it has heretofore promoted.

Therefore, while America needs more funds for her school plant, a greater appreciation and understanding of what constitutes a modern school building program is of primary importance. Pennsylvania pledges her whole-hearted support to the work of the council.

At the conclusion of Doctor Eicher's address, Commissioner Cooper introduced Dr. Charles L. Spain, of Detroit, Mich., as "the man who was responsible for the planning of buildings in Detroit for the type of school organization known as the platoon school plan. Doctor Spain's experience in reorganizing more than 100 schools in Detroit on this new type of school organization, and in directing the planning of buildings so that they are outstanding examples of buildings which combine beauty and full utilization of the school plant, means that what he has to say is always of great interest to schoolmen."

Scientific Educational Planning of School Buildings

By Dr. Charles L. Spain
Deputy Superintendent of Schools, Detroit, Mich.

One of the first educational planners of whom we have record was Henry Barnard, the famous educator, who, in cooperation with Horace Mann, instituted educational reforms in the early part of the last century. In 1850 Barnard published a book on school architecture which in many respects is more praiseworthy than any book of its kind published since that date.

Before preparing his book Barnard and his colleagues surveyed the condition of school buildings in various States and communities—in rural school districts as well as in villages and cities. Supplementing his survey as reported in his book, Barnard presented floor plans and sketches of the types of primary, grammar, and high-school buildings which in his judgment were required to house the simple curricula of that day. Among these plans was that of the Quincy Grammar School of Boston, the first graded grammar-school building erected in this country and the pattern for hundreds of later buildings. The problem of educational planning which confronted Barnard, while serious, was not as complex as that which confronts us to-day. In his day the number of subjects taught was small and the

buildings erected were merely an assemblage of single-room units, alike in size, shape, and general layout. High schools, to be sure, were somewhat more differentiated than elementary schools, but the rooms were also uniform in shape and size, and the plans of all the buildings were so simple that any architect could erect them with very little advice or guidance on the part of educators. In fact, when advice was offered it was often resented as an intrusion.

Until the last decade progress in school building construction lagged far behind progress made in improving the methods and materials of instruction which the buildings were required to house. Even now in the East and Middle West many villages and cities still make use of at least one of the old 3-story brick structures patterned after the first grammar school in Boston, and many buildings erected within the last year are of the "packing-case" type, being nothing more than an aggregation of unspecialized room units with little regard for the demands of our present diversified curriculum. Of the millions spent for school buildings in this country during the past year it is fair to say that a very large percentage was inefficiently and uneconomically spent because of lack of intelligent planning, to say nothing of inefficient architectural and engineering service. It is true that we can point to many finely constructed, efficient buildings which have been erected in recent years. Unfortunately, we can also point to some notable examples of recent school building construction which, from the standpoint of beauty of design, elegance of finish, and completeness, are commendable pieces of architecture, but which as examples of educational planning, as specimens of buildings cut and made to fit the educational program, are failures. It is distressing to spend $2,000,000 or more for a magnificent building with every modern convenience only to find that the pupil capacity of the building is so small and the arrangement of facilities so unbalanced that it is almost impossible to administer it effectively. In one instance in which the heads of departments of a high school were allowed to do the planning, a high school with pupil capacity of 1,200 has laboratory space and equipment for 2,500.

The function of the educational planner.—However, recent years have seen great progress in the construction of school buildings. Forward-looking communities are coming to realize that the new school program of specialized activities must be housed in a building which provides highly specialized rooms and facilities. To plan and erect buildings of this sort, having due regard for the needs of the curriculum, the demands of safety, the dictates of good architecture, and the financial resources of the community offers a challenge to the superintendent of schools and the architect which they did not receive in earlier years. It also makes a demand upon their resources which

few of them are prepared to meet. The architect must scrap many of his old ideas and readjust his viewpoint, and the superintendent must equip himself with new data and a technique which in the past he did not find necessary. In this situation the educational planner has emerged—the person who has the training, the technique, and the vision to translate the school curriculum and activities into definite terms and standards which are intelligible to architects and engineers.

Here is a comparatively new educational problem and one of serious import because it affects not only the cost and efficiency of buildings but in the long run affects the quality of instruction. This problem is being attacked from various angles and with varying degrees of success. At the present time many school systems still make no provision for educational planning. The school board merely orders the architect to erect a building of a given number of rooms. Some systems leave the educational planning entirely to the architect who does his best to determine the proper educational standards, but such planning often results in a building architecturally good but educationally unsatisfactory. In some instances either the school board or the architect employs a qualified educational specialist to aid both the superintendent and the architect in planning the building, and in an increasing number of school systems either the superintendent or a member of his staff is preparing himself to undertake the responsibility of school planning.

The more progressive school architects sensed the situation some time ago. They always have been eager to erect satisfactory buildings and to please the communities which they serve. To meet the present situation they are employing persons qualified to do educational planning, or at least to interpret to the architect the educational needs in a given community so that he can provide adequate buildings. This is a satisfactory combination of services but limited in its field, for, when a building is to be erected, pressure is always strong to employ a local architect and often one who is not a school building specialist, and who is not qualified to set up proper educational standards or to interpret and translate educational needs into building facilities. Such architects must have the aid of an educational planner and frequently no efficient one is available.

To meet the requirements of smaller towns and cities in this respect about one-third of our States maintain State planning divisions in connection with State departments of education. The services made available by these divisions vary in the several States. In Michigan the department establishes standards to which all buildings must conform, approves all final plans before the building can be erected, and upon invitation from any district or town will, free of cost, make a survey of the local situation before the board determines its building program. In a number of State universities schools of education are

offering an educational planning service for those who may wish to avail themselves of it. This service includes preliminary surveys, location of sites, and recommendations for the erection of buildings and additions.

In large city systems which develop their own departments of building research or possibly departments which actually plan and and erect school buildings, the problem of school planning can be readily met. Such departments employ educational planners, architects, and draftsmen who, working cooperatively in one organization, can develop preliminary sketches and check final plans with respect to their provisions for the school program which they must house. However, for a great majority of the communities in which school buildings are to be erected it would seem that the problem of educational planning is largely an administrative one for the solution of which either the superintendent or some one on his staff should be trained. For those who seek it, excellent training in school planning is now available. Colleges and schools of education are offering courses in school administration which give a student not only the theoretical training but the actual technique and practice required in making school surveys, locating schools and sites, planning and organizing curricula, and translating curricula and their attendant activities into housing facilities of a satisfactory kind.

Factors in educational planning of buildings.—All educational planning should be directed toward the goal of efficient administration, efficient and economical instruction, and architecture which not only conforms to high structural, safety, and hygienic standards but also gives due consideration to its æsthetic appeal. The first job of the educational planner is to determine the type, size, and number of the physical units required, and to so arrange these units as to conform to the demands of effective administration and proper building orientation. Having done this, his next step is to help the architect to to plan a building which conforms to the educational standards set, which is flexible and expansible, and which lends itself to good architectural treatment without being overelaborate or extravagant in design.

To properly do educational planning, the planner must give consideration to certain factors which are important.

1. The immediate and ultimate capacity of the building must be anticipated. If built in units, the first unit should be planned with reference to its possible functioning until the complete building can be made available. To provide for flexibility, small and self-sufficient building units must be employed.

2. The official policy as to class size must be considered. Class size influences floor area and it is not good policy to design a building

for a class size of 30 which must ultimately be raised to 40. On the other hand, it is wasteful to plan rooms for 40 pupils when only 25 or 30 are to be enrolled.

3. The extent and kind of organization to be housed in a building should be given serious thought. Educational objectives, organizations, and methods are changing rapidly. To fail to anticipate these changes is to plan unwisely. The traditional teacher-room-class unit is on its way out. The tendency is strongly toward specialization, departmentalization, and duplicate or modified organizations. To plan a building for the old organization is a doubtful procedure. If it is possible, a building should be a modern plant even if the organization and methods at present to be used are of the traditional type. The presence of modern facilities will in the end tend to hasten the adoption of a more liberal program.

4. Methods of teaching to be used and curricular or extracurricular activities to be provided for have an important influence on building planning. Activities determine the type of built-in and movable equipment to be used. Equipment tends to determine floor space. Fixed equipment is economical of floor space but less efficient instructionally where modern methods prevail. Specialized and movable equipment require more space, but conform to progressive instructional requirements.

5. Time allotment for various subjects in the curriculum is a qualifying factor in planning. As an illustration, if in a school of 1,200 pupils the time allotment for health education calls for one-half hour daily in the gymnasium, with 80 children in a section, one gymnasium will be sufficient. If the time allotment requires one hour a day, two gymnasiums, or one gymnasium and a playroom will be necessary.

6. All school plants are becoming community centers, and are also called upon to house adult classes. This situation raises a definite problem in educational planning. While providing for adult classes the possibility of avoiding duplication of the facilities needed for the children must be considered.

These are only a few of the important factors involved in good planning. Whether we take advantage of the various planning services available or not, the time is at hand when those of us who are administering school systems must prepare to assume the responsibility of securing school buildings more economically and efficiently planned than many of them have been in the past.

The organization of the Advisory Council on School Building Problems under the general direction of the Commissioner of Education is a move in the right direction. Through the regional groups of this organization it should be possible to make a study of the building needs in the various areas and to supply to the office of the Commissioner of Education available data on school building programs and

on building construction which may be disseminated from the central office to the various people who may be desirous of securing such information.

Work of the Council—Research and Service

The next topic on the program was "What school building problems should the council study in 1930–31?" The discussion was opened by Alice Barrows, specialist in school buildings of the Office of Education, Washington, D. C. She suggested that the work of the council be organized under two main divisions, i. e., a research division and a service division. She emphasized the desirability of making research studies which would give comparable data on certain fundamental phases of the school building problem in all the different regions. As an example of such a piece of research she submitted the following:

Suggested Study for the Research Division of the Council
"Functional Planning of School Buildings"

A. Purpose.

To make a comparative study of the planning of school plants for:

1. An elementary school of a given size.
2. A junior high school of a given size.
3. A senior high school of a given size.

B. Scope of the study.

For the coming year the study should be limited to one type of school so that it may be completed during the coming year. It is suggested that the elementary school be chosen because the majority of the school population is found in this type of school, and because some of the most striking changes in school building planning are now to be found in the elementary schools.

Number of school buildings to be studied.—It is proposed that elementary school buildings be studied in each of the following types of cities:

Cities of 100,000 population and more.

In each region the cities should be determined by the Regional Council.

It would be preferable to have one such city from each State in the region, provided that there is a recently erected modern elementary school building in each of the States.

Cities of 30,000 to 100,000. (Same procedure as for cities of 100,000.)

Cities of 10,000 to 30,000. (Same procedure as for cities of 100,000.)

Cities of 2,500 to 10,000. (Same procedure as for cities of 100,000.)

If school plants in four school districts of each of the foregoing population groups are chosen for study, then each region would study 16 such school plants or, if the study is carried on in all the 9 regions, then 144 school plants would be studied. The county schools should also be included and each region should determine the number of such schools to be studied.

Size of schools to be studied.—It would be desirable to study schools of the same size, e. g., 1,200 pupils. Since, however, the most recent school building in each of the States may not be of the same size, the following procedure is suggested:

B. Scope of the study—Continued.

Ask each superintendent in the city chosen to state what is his most modern elementary school, and ask for the enrollment. If he has two modern elementary schools, then choose the one with the enrollment which most nearly approximates the number wanted. If it is impossible to make the study of the same size school, then it will be necessary to take different sizes and work out the comparison on the basis of the percentage of space utilized, percentage of rooms devoted to academic work, special work, auditoriums, gymnasiums, etc.

Grades to be included.—It would not be possible to tell until after information is received from each city chosen for study whether the study would be made of 6-grade or 8-grade schools.

C. Topics to be included in the study.

1. Was the planning of the school building based on a school survey? If so, give full particulars in regard to points covered in the survey and methods of conducting it.
2. Planning the school plant.
   (*a*) What is the type of school to be housed?
   Elementary———K–6———K–8———
   (*b*) Number of pupils to be accommodated by grades and total.
   (*c*) Size of classes.
   (*d*) Was the educational program to be carried out in the building determined upon before the plans were drawn?
      (1) Was the educational program submitted to the architect? If so, in what form? For example, was the actual operating program for the school of a given number of classes worked out just as is done when the school is opened? Were the numbers and kinds of rooms determined on the basis of this program?
      (2) Send a copy of this program indicating the number of pupils by grade and section, and their location in rooms by the day and week; and number of teachers and location in rooms by day and week.
      (3) If the educational program was not worked out before the building was erected, send a copy of the program now being used in the building.
      (4) How do you determine the capacity of a school? Please describe this in detail.
   (*e*) Send drawings of floor plans and plot plans. Black and white drawings are preferred since they are necessary for reproduction.
      (1) Indicate on plot plan the location of playgrounds, kinds of playgrounds, and number of square feet in each playground.
      (2) What is the shape of building, i. e., E, H, U. Why did you choose this shape?
      (3) Indicate on floor plans:
         (*a*) Activity carried on in each room.
         (*b*) Dimensions of each room.
         (*c*) Dimensions of auditorium, auditorium stage, and dressing rooms.
         (*d*) Dimensions of gymnasiums and shower rooms.
         (*e*) Dimensions of swimming pools.
         (*f*) Width of corridors.
         (*g*) Location and number of lockers and wardrobes.
         (*h*) Number and dimensions of administrative units; principal's office, teachers' rest room, clinic, etc.

C. Topics to be included in the study—Continued.
2. Planning the school plant—Continued.
(*f*) Send data on costs as follows:
(1) Cost of site.
(2) Cost of building, including general construction, heating, ventilating, electric work, plumbing.
(3) Cost of equipment.
(4) Total cost of building and equipment.
(5) Cubic foot cost of building.

D. Results to be expected from the study.
Because the study is to be made of schools either of the same pupil enrollment or on a basis which will make comparison possible in regard to schools in all regions, we should secure data which will answer the following questions:

1. Was the school building planned on the basis of a preliminary survey? What were the methods used in conducting the survey? How can they be improved? What are the advantages of the survey? Was the planning of the building part of a total school building program?
2. To what extent was the planning of the building based upon the educational program? How did the educational programs in the schools studied affect the planning, arrangement, and construction of the building? Does such preliminary planning, based on the educational program, result in more adequate planning and in economies?
3. To what extent was there full utilization of the school plant in the buildings studied?
4. What are the relative values of different layouts of buildings, different sizes of rooms, etc., for schools of the same size and the same educational program?
5. How can waste in planning and in cost be eliminated for schools of the types studied?
6. What further studies should be undertaken to make the planning of buildings of these types more efficient?

Suggestions for the Organization of a Service Division of the Council

It was further suggested by Miss Barrows that in order to be able to answer the many questions in regard to details of construction of school buildings which are constantly being received, it would be well to form a service division in the council by means of which the practical experience of the different members of the council in solving school building problems might be made available. The following plan was suggested:

If any member of any Regional Council has a question on school buildings on which he wishes to obtain the opinion or experience of other members of the the council, he could send the question to the representative of the council at the Office of Education who would have mimeographed copies of the question sent to:

1. Members in all the nine regions, or
2. The particular groups in each region—city superintendents, chiefs of divisions of schoolhouse planning, etc.—who have special knowledge on the subject.

All replies would be sent to the specialist in school buildings at the Office of Education, who would tabulate them and send them out to the person asking the question and to members of the council.

By keeping mimeographed copies of these replies and tabulations, the Office of Education and the council would know at the end of a year:

1. On what kinds of problems people want information.
2. How people are solving these problems.
3. The problems on which people need help.

The one condition that would have to be observed in order to make the service effective is this:

The questions would have to be definite, concrete, and clearly worded so that the reader would understand on just what phase of the problem the questioner wants an answer. In other words, it would be necessary for the questioner to think through his problem far enough to know what he wants to know. It would be important to word the questions, when possible, so that they could be answered by "agree," "disagree," "uncertain," etc. Such general questions as, "I am going to build a school for 1,000 pupils; how shall I do it?" or "Please send me plans" could not be answered by this service.

At the end of each year the Office of Education would publish a bulletin for the council on regional advisory council service.

Discussion by Members of the Council

At 12.30 p. m., the meeting adjourned for luncheon. There were nine tables at the luncheon, one for each region, so that the members in each regional group had an opportunity to become acquainted with each other. After the luncheon, on vote of the group, everyone returned to the conference room and continued the discussion until after 3 o'clock.

Joseph H. Hixson, director of school buildings, New York State Department of Education, said:

I am extremely interested in the organization of such a council. I agree with what has already been said to the effect that the group should not become a standardizing agency. What should be done is to gather data on the best practices throughout the country, then tabulate them, analyze them, and distribute them. Everyone is not doing all work as well as some are doing particular kinds of work, and it is the particular kinds of work from people in the different regions that should be gathered.

I believe very strongly that there should be two phases of work in the council, i. e., research and service. In the early stages of this work, the research will appeal most and I am not sure but that in the end it will be the research that will help us most. I hope that over a period of years there may come out of this organization material that will be of much service to school administrators, architects, engineers, contractors, and construction men. But let me repeat—we must stay away from standardization.

Frank H. Wood, president of the Board of Education, Chatham, N. Y., and for many years director of school buildings of the New York State Department of Education, spoke as follows:

Our problem in this council should be fact-gathering, and no attempt should be made at theorizing. There is altogether too much of that sort of thing with too little basis of fact. We must start with the child as the center. We should begin

with the school home of the child, interior rather than exterior. We ought to take an inventory of our buildings, what they are, how they are used, whether they are being utilized to the extent to which they should be. Utilization of the school plant is one of the most important studies which could be undertaken by this group. I believe that any research study that is carried on should be conducted simultaneously in all the regions of the council so that we may get comparative data over a wide area.

To illustrate the points brought out in his talk Mr. Wood gave a report on certain phases of a school building study made under his direction by the Chatham Board of Education. He showed a number of most interesting charts and graphs showing the type of material collected in the study and giving some valuable data on the bifferences in utilization of the school plant and the effect of the educational program upon the building and upon the educational progress of the children. It is hoped that a full report of this valuable study may be made available to the members of the council.

Superintendent Marrs, in introducing the next speaker, Miss Sue Powers, superintendent of schools, Shelby County, Tenn., said:

Possibly the greatest service that can be rendered by the council is to the rural school and smaller schools that do not have the means for employing a competent architect and who need advice on school building problems. I am glad to know that the next speaker is a county superintendent of schools who will probably speak about rural school problems.

Miss Powers said:

I am most happy to be here. When Commissioner Cooper asked me to serve on this council I accepted with some misgivings. I am not trained in architecture, but I decided I would not be the only person on the council who had not had special training in this work. When I became county superintendent I had had very little experience in that sort of work but of necessity have had to become familiar with it.

Coming at the last of this program I have heard all the speeches and have been very much impressed with the work that has been done. When I was listening to the last speaker I could almost close my eyes and imagine I was listening to our young superintendent of schools who is making an urgent plea for the best use of school funds. He feels that until we get the things for our schools and for our school children that are essential, but perhaps not of the finest, we should let the "nice" but not necessary things go. He would like to see good schoolrooms of sufficient size, and well equipped, well lighted, and well heated for every child in our county. He would like to see a well-trained teacher in that schoolroom for every child. Not until we have those essentials should we give our attention to those things we can do without. His one hobby is an equal chance for every boy and every girl in the country with those of the cities. We do not talk very much about buildings in the country. We are more concerned with those in the cities. But the rural school problems must be solved and for that solution we need well-equipped rural school buildings all over the country. There is a great change taking place in education and my plea is that in these changes the rural school be not overlooked. I feel that the cities of our State must help bear the expense and help take care of the rural situation. The city of Memphis helps pay for the rural schools of Shelby County. Every other city in the State should help in the same manner. Again I present my plea: Do not overlook the rural school.

Dr. Charles B. Glenn, superintendent of schools of Birmingham, Ala., and Dr. A. B. Meredith, State commissioner of education of Connecticut, who had been asked to take part in the discussion were not able to be present but they submitted very comprehensive lists of school building problems which in their opinion it would be desirable for the council to study. As Charles A. Rice, superintendent of schools, Portland, Oreg., was not able to be present, Assistant Superintendent Norman C. Thorne of Portland represented him and discussed the importance of school building surveys in solving school building problems.

Election of Council Officers and Regional Chairmen

In accordance with the suggestion of Commissioner Cooper, each region elected its own chairman for the year 1930–31. In some cases secretaries were also elected. The following are the chairmen for each region: New England region—L. H. Baldwin, school board member, Rutland, Vt. (temporary chairman[2]); New York region—Joseph H. Hixson, director, division of school buildings, New York State Department of Education; Middle Atlantic region—HuBert C. Eicher, director of school buildings, Pennsylvania State Department of Education; South Atlantic region—A. T. Allen, State superintendent of public instruction, North Carolina; Great Lakes region—Frederick W. Garber, architect, Cincinnati, Ohio; Gulf States region—S. M. N. Marrs, State superintendent of public instruction, Texas; Sierra Nevada region—Vierling Kersey, State superintendent of public instruction, California. The Middle Atlantic region elected Charles T. Ingham, architect, Pittsburgh, Pa., as the secretary of that region. Neither the Central States nor the Western Mountain States regions elected chairmen, since there were so few representatives present from these regions. They decided to elect a chairman at their first regional meetings.

The council elected the United States Commissioner of Education, William John Cooper, as the chairman of the National Council for the year 1930–31, and Alice Barrows, specialist in school building problems, Office of Education, as secretary. It was also voted that a steering committee be appointed, consisting of Commissioner Cooper, the chairman of the 9 regional councils, and Miss Barrows, and that this committee should determine the general policies and methods of procedure for the council. The steering committee formally approved the organization of a research division and service division in the council and recommended that the plans for the research work be carried on through meetings of the different regional councils in order to insure

[2] Since Mr. Baldwin stated that he could serve only as temporary chairman, the New England Regional Council at its first meeting in Boston on Apr. 22, elected Mr. A. J. Stoddard, Superintendent of Schools, Providence, R. I., as chairman for 1930–31.

that all research studies be based upon a careful consideration of the local conditions in each region. After the research studies have been carefully worked out by each region, in conference with the secretary of the council, the Office of Education will undertake to secure the material and submit the results to each regional group for analysis and criticism.

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